6GH8A

Medium-Mu Triode—Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

For Multivibrator-Type Horizontal-Deflection Oscillator, AGC Amplifier, and Sync-Separator Applications

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:

Voltage (AC or DC)	6.3[a]	6.3 ± 0.6	volts
Current	0.450 ± 0.030	0.450[b]	amp
Warm-up time (Average)	11	–	sec
Peak heater-cathode voltage (Each unit):			
Heater negative with respect to cathode		200 max.	volts
Heater positive with respect to cathode		200[c] max.	volts

Direct Interelectrode Capacitances:

	Without External Shield	*With External Shield*[d]	
Triode Unit:			
Grid to plate	1.7	1.7	pf
Grid to cathode, pentode grid No.3 & pentode cathode & internal shield, and heater	3.0	3.2	pf
Plate to cathode, pentode grid No.3 & pentode cathode & internal shield, and heater	1.4	1.9	pf
Heater to cathode	3.0	3.0[e]	pf
Pentode Unit:			
Grid No.1 to plate	0.02 max.	0.01 max.	pf
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater	5.0	5.0	pf
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater	2.6	3.4	pf
Heater to cathode & grid No.3 & internal shield	3.0	3.0[e]	pf

Characteristics, Class A_1 Amplifier:

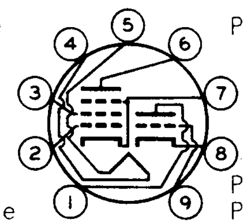
	Triode Unit	*Pentode Unit*	
Plate Voltage	125	125	volts
Grid-No.2 Voltage	–	125	volts
Grid-No.1 Voltage	−1	−1	volt
Amplification Factor	46	–	
Plate Resistance (Approx.)	5400	200000	ohms
Transconductance	8500	7500	μmhos

Plate Current	13.5	12	ma
Grid-No.2 Current	–	4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 10	-8	-8	volts

Mechanical:

Operating Position	Any
Type of Cathodes	Coated Unipotential
Maximum Overall Length	2-3/16"
Maximum Seated Length	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip)	1-9/16" ± 3/32"
Diameter	0.750" to 0.875"
Dimensional Outline	See *General Section*
Bulb	T6-1/2
Base	Small-Button Noval 9-Pin (JEDEC No. E9-1)
Basing Designation for BOTTOM VIEW	9AE

Pin 1 - Triode Plate
Pin 2 - Pentode Grid No.1
Pin 3 - Pentode Grid No.2
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Pentode Plate



Pin 7 - Pentode Cathode, Pentode Grid No.3, Internal Shield
Pin 8 - Triode Cathode
Pin 9 - Triode Grid

HORIZONTAL-DEFLECTION OSCILLATOR

For operation in a 525-line, 30-frame system[f]

Maximum Ratings, *Design-Maximum Values:*

	Triode Unit	*Pentode Unit*	
PLATE VOLTAGE	330 max.	350 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	–	330 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
Peak-negative value	–	175 max.	volts
PLATE DISSIPATION	2.5 max.	2.5 max.	watts
GRID-No.2 INPUT	–	0.55 max.	watts
CATHODE CURRENT:			
Peak	–	300 max.	ma
Average	–	20 max.	ma

Maximum Circuit Values (Each Unit):

Grid-No.1-Circuit Resistance: For fixed-bias or cathode-bias operation	2.2 max.	megohms

[a] At heater amperes = 0.450.
[b] At heater volts = 6.3.
[c] The dc component must not exceed 100 volts.
[d] With external shield JEDEC No.315 connected to cathode of unit under test except as noted.
[e] With external shield JEDEC No.315 connected to ground.
[f] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

INTERELECTRODE LEAKAGE

Leakage Resistance between Plate of Each Unit and All Other Electrodes of both units tied together . . . . 100 min. megohms

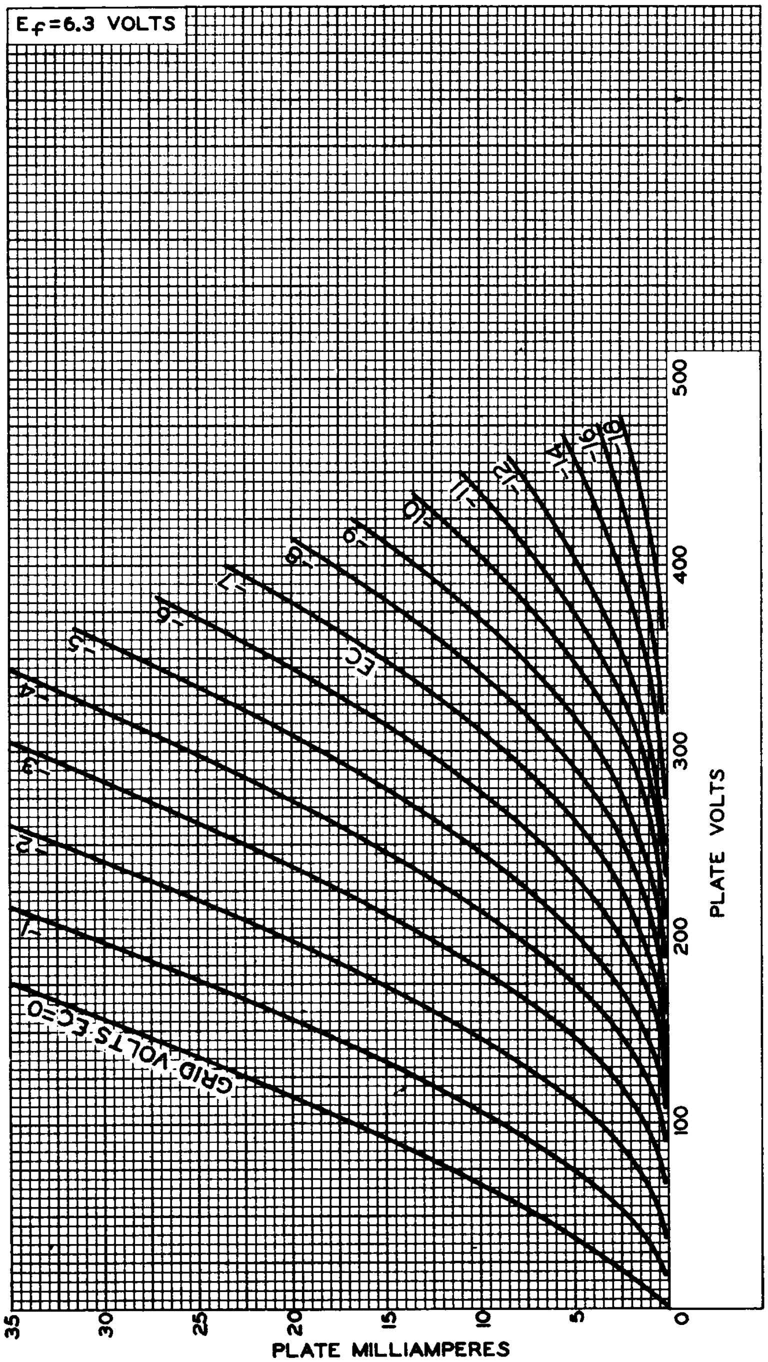
This test is performed under the following conditions: heater volts = 6.3; and plate 300 volts negative with respect to all other electrodes tied together.

Leakage Resistance between Grid No.1 of Each Unit and All Other Electrodes of both units tied together . . . . 100 min. megohms

This test is performed under the following conditions: heater volts = 6.3; and grid 100 volts negative with respect to all other electrodes tied together.

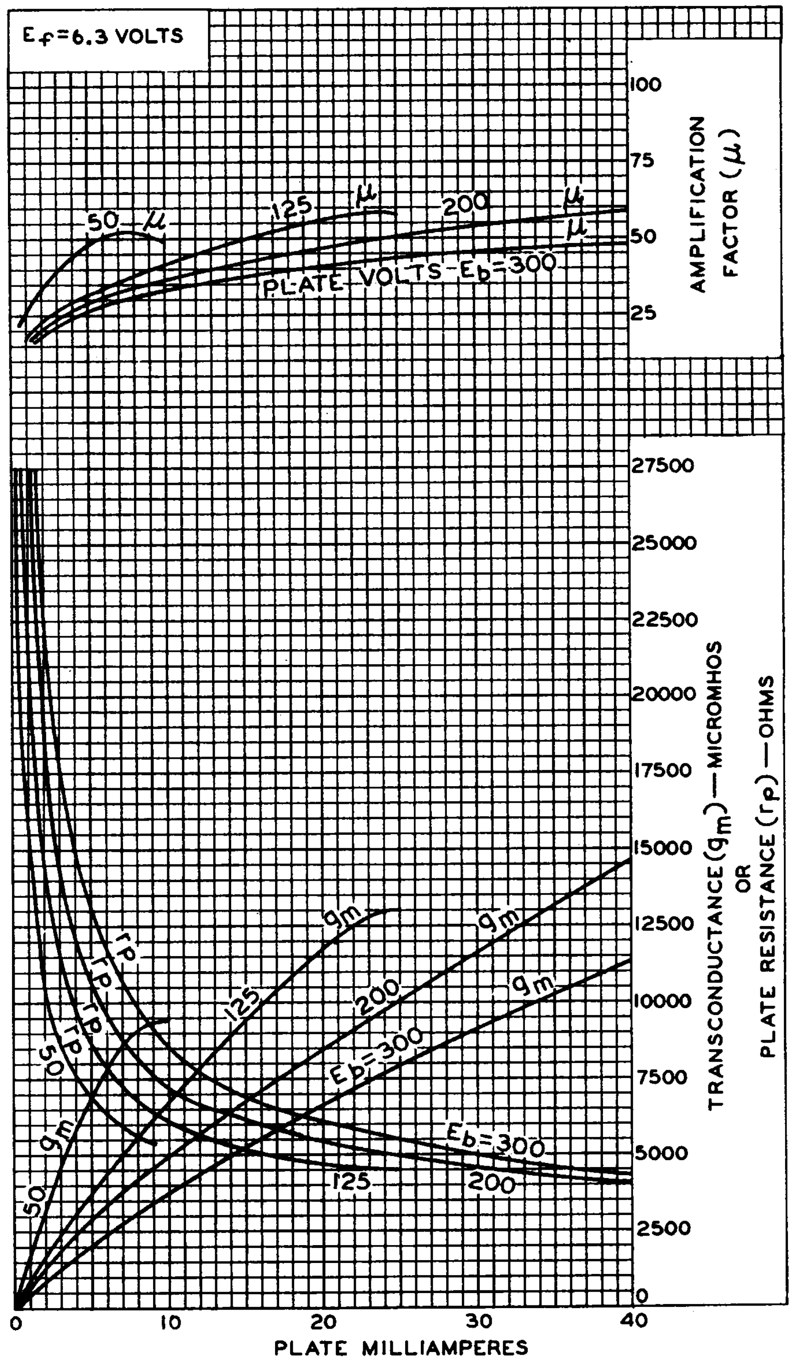
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AVERAGE PLATE CHARACTERISTICS
Triode Unit



92CM-10421R1

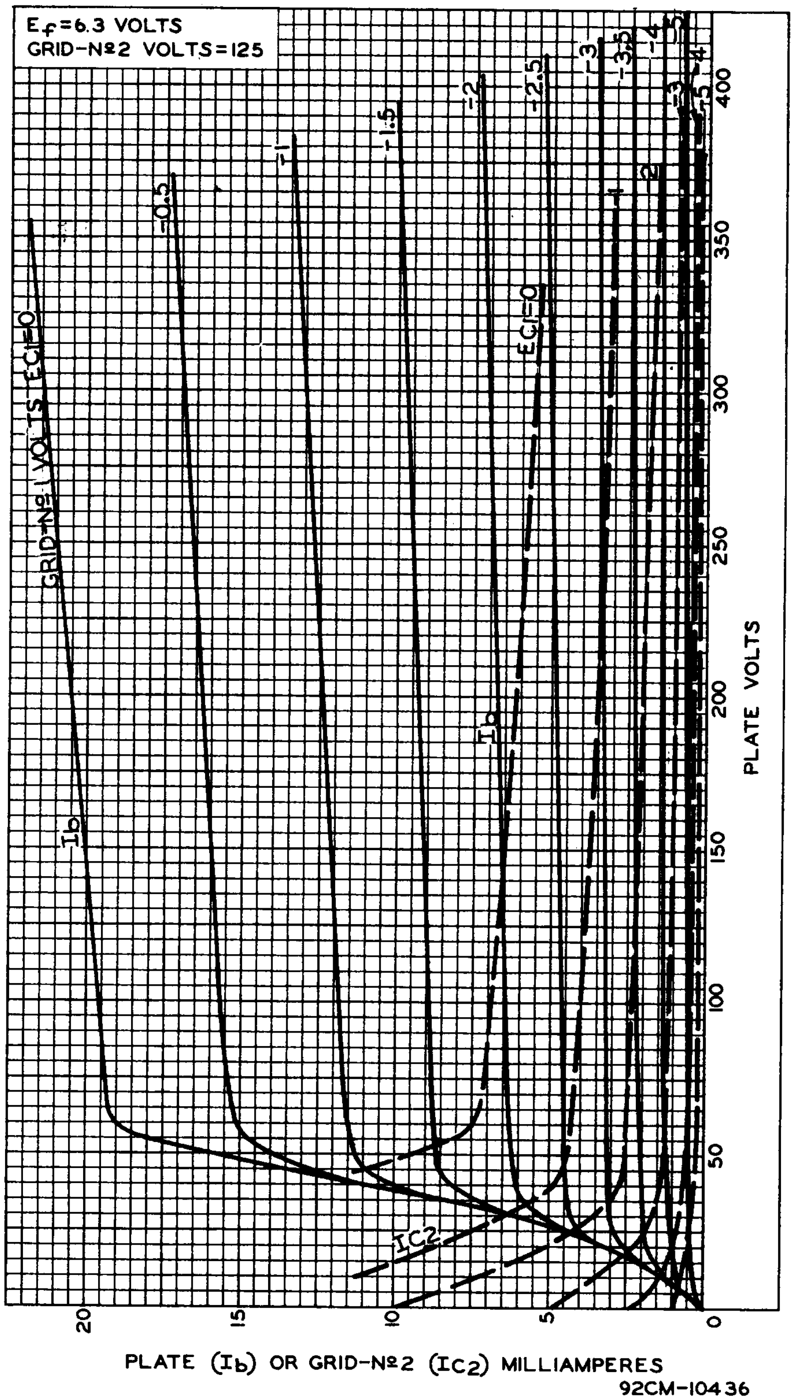
AVERAGE CHARACTERISTICS
Triode Unit



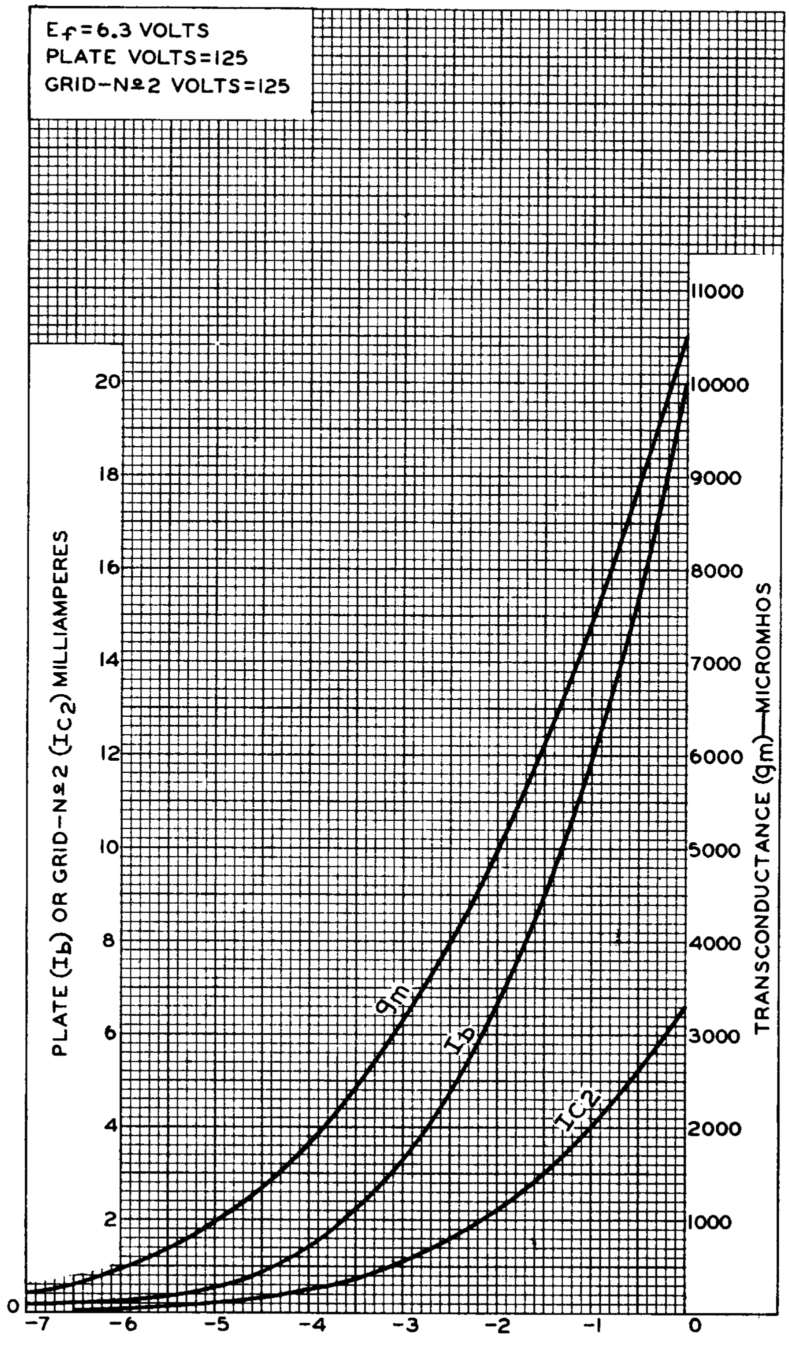
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AVERAGE CHARACTERISTICS
Pentode Unit



AVERAGE CHARACTERISTICS
Pentode Unit



92CM-10417